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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,265	01/20/2004	Kevin Paul Phillips	1487.0180001/DKSC/EDH	6862
26111 7590 07/26/2007 STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C. 1100 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER SAMUEL, DEWANDA A	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/759,265

Applicant(s)

PHILLIPS ET AL.

Examiner

DeWanda Samuel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-10, 12-22 and 25-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-10, 12-22 and 25-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 20 January 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 20 January 2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: in the brief description of drawings fig. 7 and fig. 8 does not correspond to the correct drawing (paragraph 26 and 27). Appropriate correction is required.

The disclosure is objected to because of the following informalities: The acronym "MES" is not properly defined. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. **Claim 17, 18, 19, 20, 25, 26 and 27** rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claims 17, recites limitation "first message indication" need to clarify. Appropriate correction is required.

With regard to claims 18, recites limitation "said second message indication", need to clarify. Appropriate correction is required.

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With regard to claims 19, recites limitation "said selected mobile terminal receives a message channel transmitted by said earth station", needs to be defined. Appropriate corrections are required.

With regard to claims 20, recites limitation "receiving a channel transmitted by said earth station", needs to be defined. Appropriate corrections are required.

With regard to claims 25, recites limitation "minimum channel spacing between frequency channels within either of said first and second channel groups is less than the minimum channel spacing between any frequency channel of said first group and any frequency channel of said second group", need to clarify. The Examiner used interpreted own interpretation

With regard to claim 26 and 27, the limitation "minimum value" is not clearly stated. The examiner is interpreting the minimum value as follows.

With regard to claim 26 recites the limitation "said group" in page 8 line 1-22. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 28 and 31** are rejected under 35 U.S.C. 102(e) as being anticipated by Modzelesky et al. (US Patent 6,272,338).

With regard to claim 28, Modzelesky et al. discloses having a *method of communication between a mobile terminal and a satellite earth station via a repeating satellite, comprising: transmitting signals from said satellite earth station to said mobile terminal using a BPSK modulation scheme; and receiving signals at said satellite earth station from said mobile terminal modulated using a B/2 BPSK modulation scheme.*

Modzelesky et al. discloses having a mobile satellite system with mobile terminals ("mobile terminal") throughout the coverage area (column 12 line 56)...a MET (mobile earth terminal, "satellite earth station") and a satellite (fig. 1). Modzelesky et al. further discloses the mobile terminals throughout the area covered by any beam received GC-

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S channels.... The MET-SR (mobile earth terminal, "earth station") random access channels operate in the BPSK mode (column 12 line 56-67)...the MET-ST (mobile earth terminal, "earth station") TDMA channels operate in the BPSK mode at 96 bits and $\frac{1}{2}$ coded (column 13 line 1-6).

With regard to claim 31, Gardner et al. discloses having a *method of operating an earth station for transmitting messages via a satellite to a messaging terminal*, Gardner et al. discloses having a base station 411 ("earth station") transmitting messages to a mobile unit 401 in a establish airlink (column 7 line 25-28).

comprising: receiving a sleep mode request from the mobile terminal; in response to said request, transmitting a sleep mode allocation to said messaging terminal; Gardner et al. discloses receiving a sleep mode request from the mobile unit 401 and permits the mobile unit 401 to power down (column 7 line 18-32).

transmitting messages to said terminal within a repeating first period corresponding to said sleep mode allocation; and inhibiting the transmission of messages to said terminal within a repeating second period corresponding to said sleep mode allocation. Gardner et al. discloses transmitting messages to the mobile unit 401 within the idle time once expire the mobile unit is in sleep mode (column 7 line 28-37).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. **Claims 8-10 and 32** are rejected under 35 U.S.C. 103(a) as being unpatentable over Dutta (US Patent 6,130,887) in further view of Snowden et al. (US Patent 5,930,681).

With regard to claim 8, Dutta discloses having a *method of transmitting messages of variable length from a first earth station via satellite to a second earth station*, Dutta discloses having a satelliterelay communication system 100 (column 5 line 51-52 and column 6 line)...user message communications via the communication sytem 100 is contemplated to be bidirectional, such that any of the mobile terminals 120

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may originate communications with the corresponding fixed user station 110 (column 6 line 17-20).

the method comprising, for each said message: formatting the data content of said message to generate one or more data packets of constant length, each data packet comprising packet information and data; Dutta discloses having a frame formatter and deformatter subsystem 184...the assembled information includes predetermined network management information and any user messages which can be accommodated in available data byte positions in each such frame (column 8 line 45-49).

Dutta does not explicitly disclose *determining an integral number of data packets per frame and an integral number of frames according to the number of said data packets and a maximum value of said number of data packets per frame, such that the product of said number of packets per frame and said number of frames is equal to the total number of data packets or greater than the total number of data packets by a minimum number;* Snowden discloses having a supergroup frame that includes message frames with assigned number of group message frames (column 5 line 16-67).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have message communication system as taught by Dutta with assigning the message frames for a supergroup as taught by Snowden et al. to provide a mechanism to collectively communicate messages in the system.

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formatting said data packets into said number of frames, each of said frames having no more than said number of packets per frame; Dutta discloses having different frame formats such as fig. 6A –6H and each superframe comprises a total available data bytes per frame

encoding each said frame independently of the other said frames; and transmitting said encoded frames from the first earth station to the second earth station. Dutta further discloses having encoding techniques whereby data is transmitted as coded bits at a symbol rate (sps) which is higher (column 20 line 1-6).

With regard to claim 9, in combination Dutta and Snowden et al. teaches the method recited in claim 8. *wherein the data capacity of each of said data packets is 32 bytes. Dutta disclose having user messages ("data packets", column 8 line 49)*. However, Dutta dose not explicitly discloses data capacity of each of said data packets is 32 bytes. Kronz discloses having two types of packet lengths "long" and "short" wherein the minimum packet (slice) size is 32 bytes (page 4 paragraph 48 line 5-8).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have user messages ("data packets) as taught by Dutta with a minimum packet (slice) size is 32 bytes as taught by Kronz to provide a fixed minimum packet length to achieve the maximum throughput.

With regard to claim 10, in combination Dutta and Snowden et al. teaches the method recited in claim 8. *wherein the maximum value of said number of packets per frame is 16 packets*. Dutta discloses in fig. 6F-6H different number of frames within the superframe . It is inferred the number of packet within a superframe can vary depending on the configuration of the system.

Dutta discloses the claimed invention except for 16 packets per frame. It would have been obvious to one having ordinary skill in the art at the time the invention was made allocate n number packets within the super frame to ensure maximum throughput, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

With regard to claim 32, in combination Dutta and Snowden et al. teaches the method recited in claim 8. *wherein one of said first and second earth stations is a satellite earth station and the other of said first and second earth stations is a mobile terminal*. Dutta discloses having land user station 111 and mobile terminal 120. Dutta further discloses having a user stations 111 and 112 communicates to a plurality of associated terminals 120 which may be structurally identical.

8. Claims 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dutta (US Patent 6,130,887) in view of Snowden et al. (US Patent 5,930,681).

With regard to claim 12, Dutta discloses having a *mobile satellite communications terminal, comprising: an input device for inputting a message*; Dutta discloses having a LES 140 in fig. 2 (land earth staion, "mobile satellite communications terminal")...with a radio frequency (RF) trans-receive subsystem 176 (column 7 line 38-44).

a formatter for formatting said message to generate one or more data packets of constant length, each data packet comprising packet information and data, for determining an integral number of packets per frame and an integral number of frames according to the number of data packets and a maximum value of said frame length, such that the product of said number of packets per frame and said number of frames is equal to the total number of data packets or greater than the total number of data packets by a minimum number, and for formatting the data packets into said number of frames, each having no more than said number of packets per frame; Dutta discloses having a frame formatter and deformatter subsystem 184 (formatter)...the assembled information includes predetermined network management information and any user messages which can be accommodated in available data byte positions in each such frame (column 8 line 45-49). However, Dutta dose not disclose having integral number of frames according to the number of data packets and a maximum value of said frame length, such that the product of said number of packets per frame and said number of frames is equal to the total number of data packets or greater than the total number of data packets by a minimum number. Snowden discloses having a supergroup frame

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that includes message frames with assigned number of group message frames (column 5 line 16-67).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have message communication system as taught by Dutta with assigning the message frames for a supergroup as taught by Snowden et al. to provide a mechanism to collectively communicate messages in the system.

an encoder for encoding each of said frames independently of the other said frames, and a transmitter for transmitting said encoded frames to a satellite. Dutta discloses having a TDM modulator 191 in fig. 2 comprises a convolutional encoder 193 (column 8 line 60-67 and column 9 line 4-6). It is inferred the modulates the frames of information such as encoding and transmit to the satellite system.

With regard to claim 14, in combination Dutta and Snowden et al. teaches the terminal recited in claim 12. *wherein the maximum value of said frame length is 16 packets.* Dutta discloses in fig. 6F-6H different number of frames within the superframe. However, Dutta does not explicitly disclose the maximum value of said number of packets per frame is 16 packets.

Dutta and Snowden et al. discloses the claimed invention except for 16 packets. It would have been obvious to one having ordinary skill in the art at the time the invention was made ***, since it has been held that discovering an optimum value of a

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result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

9. **Claim 13** is rejected under 35 U.S.C. 103(a) as being unpatentable over Dutta (US Patent 6,130,887) and Snowden et al. (US Patent 5,930,681) as applied to claim 12 above, and further in view of Kronz (PG PUB 2004/0086373).

With regard to claim 13, in combination Dutta and Snowden et al. teaches the terminal recited in claim 12. *wherein the data capacity of each of said packets is 32 bytes*. Dutta disclose having user messages ("data packets", column 8 line 49). However, Dutta dose not explicitly discloses data capacity of each of said data packets is 32 bytes. Kronz discloses having two types of packet lengths "long" and "short" wherein the minimum packet (slice) size is 32 bytes (page 4 paragraph 48 line 5-8).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have user messages ("data packets) as taught by Dutta with a minimum packet (slice) size is 32 bytes as taught by Kronz to provide a fixed minimum packet length to achieve the maximum throughput.

10. **Claim 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kronz (PG PUB 2003/0086373) in view of Modzelesky et al. (US patent 6,272,3378).

With regard to claim 15, Kronz discloses a *method of transmitting information from a mobile satellite communications terminal to a satellite earth station via a satellite*; Kronz discloses having a satellite network 200 with plurality communication terminals 220 which is a very small aperture antenna terminal (VSAT, page 2 paragraph 29-30). *comprising: receiving from said satellite earth station signaling channel information indicating a frequency channel, a frame division and a timing reference signal*; Kronz discloses having a point-to-multipoint communication network such as a satellite network 200 comprised a network hub 210 (page 2 paragraph 29 line 1-4 and paragraph 30 line 1-8)...the network hub receives an explicit or implicit reservation request *selecting one of a long slot length and a short slot length*; Kronz discloses having a long and short packets of indicated length with various slot sizes that match their length (page 4 paragraph 48-49). *determining a random or pseudo-random slot allocation*; Kronz discloses having a random Aloha mode, it selects a time slice in a time slice gap 350, between reserved timeslots, for random Aloha data transmission (page 3 paragraph 46 line 4-8).

Kronz does not explicitly disclose *transmitting said information in said frequency channel with a timing determined according to the timing reference signal, said frame division, the selected slot length and the slot allocation, such that the information is transmitted within a selected time slot within a frame synchronized with said timing reference signal*; Modzelesky et al. discloses a signaling scheme implementing a GC-S

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frame on a GC-S channel ("frequency channel"). Modzelesky et al. further discloses additional timing information is given for MET-ST TDMA channels (column 13 line 1-15).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a busrt-type communication network (page 1 paragraph 7) transmitting data to a network hub 210 as taught by Kronz with a signaling scheme that transmit frequency channel information as taught by Modzelesky et al. to provide a mechanism that will synchronize bursty data transmission.

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and comprising a successive plurality of short time slots and a successive plurality of long time slots, the respective numbers of said long and short time slots being defined by said frame division, the information being transmitted either in one of said long time slots or in one of said short time slots according to the selection of a long slot length or a short slot length respectively, the individual one of said slots being determined by said slot allocation ; Kronz discloses having a conventional slotted Aloha protocol in which the traffic is a mixture of short packet and long packets and slots that match their packet size(page 4 paragraph 49-49 and table 2)...the time frame is divided into two types of time slots :reserved request slots and reserve red slots. The reservation request slots are each one slice in duration and transmission within these slots are each one slice in duration and transmission within these slots are via conventional slotted Aloha (page 4 paragraph 51 line 1-11). It is inferred the convention slotted Aloha transmit packets within time slots that corresponds to their packet size.

11. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Modzelesky et al. (US patent 6,272,3378) in view of Kronz (PG PUB 2003/0086373).

With regard to claim 16, Modzelesky et al. discloses having a *method of receiving information from a plurality of mobile satellite communications terminals at a satellite earth station via satellite*, Modzelesky et al. discloses having a mobile satellite system... the network system having a satellite antenna for receiving and transmitting a satellite message via satellite to and from a mobile earth station (Abstract).

comprising: transmitting to said terminals a timing reference signal and signaling channel information indicating a frequency channel and a frame division; Modzelesky et al. discloses a signaling scheme implementing a GC-S frame on a GC-S channel ("frequency channel"). Modzelesky et al. further discloses additional timing information is given for MET-ST TDMA channels (column 13 line 1-15).

and receiving said information from said terminals in said frequency channel in a format comprising a frame consisting of a successive plurality of long time slots and a successive plurality of short time slots, the respective number of said short and long time slots being dependent on said frame division, each of said slots containing a burst transmitted by one or more of said terminals. Modzelesky et al. discloses having a MET (mobile earth terminal, "satellite earth station") includes all the communication and control functions necessary to support communication from a vehicle or fixed remote site using the resources of the satellite network system (column 9 line 39-41)... comprises a receiver that accepts modulated RF (radio frequency) signals from the antenna subsystem (column 10 line 11-13)... inband signaling channels (FES-C and MET-C) are provided between the FES and the MET. Theses channels are used to provide signaling for call setup and call release and also provide the capability to pass

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other signaling information while the call is in progress...frames containing inband signaling message employ a unique word different from the frames used for only voice (column 14 line 32-51). However, Modzelesky et al. does not explicitly disclose a frame consisting of a successive plurality of long time slots and a successive plurality of short time slots, the respective number of said short and long time slots being dependent on said frame division, each of said slots containing a burst transmitted by one or more of said terminals. Kronz discloses having a time frame that is divide up into two types of time slots: reservation request slots and reserved slots. The reservation request slots are each a slice in duration and transmission within these slots is via conventional slotted Aloha (page 4 paragraph 51-52). Kronz further discloses the conventional slotted protocol Aloha protocol uses various slot sizes when the network traffic has packets of varying length such as short and long packets (page 4 paragraph 49 line 1-11).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a frames containing inband signaling as taught by Modzelesky et al. with a short and long packets with slots that match the packet size as taught by Kronz to maximize throughput when the when the slots are matched to the packet size.

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12. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Modzelesky et al. (US Patent 6,272,338) in view of De Baere et al. (US Patent 6,370,126) and Palvianen (US Paten 6,662,005).

With regard to claim 17, Modzelesky et al. discloses having a *method of operating a mobile communications system comprising an earth station, a network coordination station, and a plurality of mobile terminals each able to communicate with said earth station and network coordination station via a satellite*, Modzelesky et al. discloses a having a mobile satellite communication system comprises of a mobile earth station ("earth station") a network operation center ("network coordination station", Abstract and fig. 1 and 9B) and plurality of mobile users communicating via satellite to and from the mobile earth station (Abstract).

the method comprising: storing at said earth station information identifying a registered group of said mobile terminals; Modzelesky et al. discloses having a MET (mobile earth terminal, "earth station") whereby providing mobile users access to the communications channels and services provided by the satellite network system (column 4 line 36-39). Modzelesky et al. further discloses each MET (mobile earth terminal, "earth station") is assigned to one of the outbound TDM channels in the control group (column 14 line 15-31). However, Modzelesky et al. does not explicitly discloses storing at said earth station information identifying a registered group of said mobile terminals. De Baere et al. having a satellite communication network comprise earth station node 6 ("earth station") includes a local store 48 for storing details of each mobile terminal ("mobile terminal") equipment 2a within the area served by satellite 4 with which the nodes is in

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communication (column 5 line 15-19). It is inferred the mobile terminals within the area of satellite 4 makes up a group of registered mobile terminals that have access to the communication channels.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have MET (mobile earth terminal, "earth station") as taught by Modzelesky et al. storing details of each mobile terminal ("mobile terminal") as taught by De Baere et al. to provide a mechanism to prevent unauthorized users from using network resources.

Modzelesky et al. does not explicitly discloses *storing a message including address information indicating a selected one of said mobile terminals; determining whether said selected mobile terminal is one of said registered group of mobile terminals; and if said selected mobile terminal is not one of said registered group, sending a first message indication from said earth station to said network coordination station, said first message indication including an identity code identifying said selected mobile terminal; and if said selected mobile terminal is one of said registered group, transmitting a second message indication from said earth station to said selected mobile terminal.*

Palvianen discloses having a data access in a telephone system (title). Palvianen further discloses having a closed user group with a CUG IC 12 (closed user group network specific identifier, " group identity code") comparing the group data and selecting a subscriber in the group (column 6 line 13-43).

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Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have MET (mobile earth terminal) as taught by Modzelesky et al. initializing a closed user group with a CUG IC 12 (closed user group network specific identifier, " group identity code") as taught by Palvianen to provide a mechanism that will prevent data security during a call.

13. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Modzelesky et al. (US Patent 6,272,338) and De Baere et al. (US Patent 6,370,126) and Palvianen (US Paten 6,662,005) as applied to claim 17 above, and further in view of Palvuanen (US Patent 6,662,005).

With regard to claim 18, in combination Modzelesky et al., De Baere et al. and Palvianen teaches the method recited in claim 17. *Wherein if said selected mobile terminal is one of said registered group, said second message indication comprises said message.* Modzelesky et al. discloses having a mobile satellite system which includes a MET (mobile earth terminal, column 9 line) transmitting message (Abstract). However, Modzelesky et al. does not disclose mobile terminal is one of said registered group, said second message indication comprises said message. Palvianen discloses having a data access in a telephone system (title)... a specific subscriber is check to see if the subscriber is apart of a CUG (closed user group) and if verified to be part of the group the call setup will continue (column 7 line 48-57). It is inferred the call setup will transmit the messages during the call.

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Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have MET (mobile earth terminal) as taught by Modzelesky et al. specific subscriber associated with a CUG (closed user group) setting up a call to receive messages as taught by Palvianen to provide a mechanism that will verify specific users in a group.

With regard to claim 21, in combination Modzelesky et al., De Baere et al. and Palvianen teaches the method recited in claim 20. *further comprising transmitting said message from said first earth station in said channel*. Modzelesky et al. discloses having a MET (mobile earth terminal, "earth station") transmitting signaling messages in in different types of channels (column 11 line 48-67 and column 12 line 1-8).

With regard to claim 22, in combination Modzelesky et al. and De Baere et al. teaches the method recited in claim 20. *further comprising transmitting a message channel indication from said first earth station in said channel: receiving a message channel at the selected mobile terminal, in response to said message channel indication; and at the earth station, transmitting said message in said message channel*.

14. Claims 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Henson (US Patent 5,974,324) in view of Modzelesky et al. (US patent 6,272,338).

With regard to claim 25, Henson discloses having a *method of allocating respective transmission frequencies to a plurality of mobile terminals in a satellite communications system*, Henson discloses cellular telecommunication network. It is inferred that mobile terminals are being used in the network.

comprising: transmitting to a first group of mobile terminals a first common frequency channel containing first frequency channel information allocating a first group of successive frequency channels to said first group of mobile terminals; Henson discloses having a plurality of cells ("groups") being assigned frequency channels (column 3 line 15-67 and table 2).

and transmitting to a second group of mobile terminals a second common frequency channel containing second frequency channel information allocating a second group of successive frequency channels to said second group of mobile terminals; Henson discloses having a plurality of cells ("groups") being assigned frequency channels (column 3 line 15-67 and table 2).

wherein the minimum channel spacing between frequency channels within either of said first and second channel groups is less than the minimum channel spacing between any frequency channel of said first group and any frequency channel of said second group. Henson discloses having a frequency reuse distance 30 between two cells on the same frequency group within a conventional frequency reuse plan (column 4 line 45-51). However, Henson does not disclose minimum channel spacing between frequency channels within either of said first and second channel groups is less than the

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minimum channel spacing between any frequency channel of said first group and any frequency channel of said second group. Modzelesky et al. discloses having a outbound TDM channel or GC-S channel with a nominal channel spacing of 7.5 KHz

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have frequency reuse distance 30 as atught by Henson with a nominal channel spacing of 7.5 KHz as taught by Modzelesky et al. to provide a mechanism to avoid interference.

15. Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henson (US Patent 5,974,324) and Modzelesky et al. (US patent 6,272,338) as applied to claim 25 above, and further in view of Karabinis et al. (US Patent 6,975,58).

With regard to claim 26, in combination Henson and Modzelesky et al. teaches the method recited in claim 25. *wherein said minimum channel spacing within each said group is 1.25 or 2.5 kHz*. Henson discloses having a frequency channels associated with a group (Abstract). However, Henson does not explicitly disclose having minimum channel spacing within each said group is 1.25 or 2.5 kHz. Karabinis et al. discloses INMARSAT-M satellite system uses 5KHz channel spacing (column 1 line 35-36).

Henson and Karabinis et al. discloses the claimed invention except for frequency range of at least 2.5kHz. It would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the channel space between frequency

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to prevent co channel interference since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

With regard to claim 27, in combination Henson and Modzelesky et al. teaches the method recited in claim 25. *wherein said minimum channel spacing between channels of said first and second group is 3.75 or 5 kHz*. Henson discloses having a frequency channels associated with a group (Abstract). However, Henson does not explicitly disclose having minimum channel spacing within each said group is 3.75 or 5 kHz. Karabinis et al. discloses INMARSAT-M satellite system uses 5KHz channel spacing (column 1 line 35-36).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have frequency channels associated with a group as taught by Henson with a channel spacing of a 5 kHz as taught by Karabinis et al. to prevent co channel interference.

16. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haugli et al. (US Patent 5,991,279) in view of Palvianen (US Patent 6,662,005).

With regard to claim 29, Haugli et al. discloses having a *method of addressing a plurality of mobile terminals in a satellite earth station arranged to communicate with said mobile terminals via a satellite*; Haugli et al. discloses having a plurality of mobile

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terminals and earth station whereby includes the addresses of target mobile terminals or a group of terminals (column 13 line 9-19).

comprising: storing a plurality of arrays each containing a list of addresses of a group of said mobile terminals; receiving a group identity code and a group index code; selecting one of said arrays according to said group identity code and selecting one of the addresses within said selected array according to said group index code, Haugli et al. discloses storing a target mobile terminal or more group addresses of terminals in the earth station ("earth station", column 13 line 9-19) However, Haugli et al. does not disclose receiving a group identity code and a group index code; selecting one of said arrays according to said group identity code and selecting one of the addresses within said selected array according to said group index code. Palvianen discloses having a data access in a telephone system (title). Palvianen further discloses having a closed user group with a CUG INDEX 2 (closed user group, "group index code") , a CUG IC 12 (closed user group network specific identifier, " group identity code") comparing the group data and selecting a subscriber in the group (column 6 line 13-43).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have earth station as taught by Haugli et al. initializing a closed user group with identifiers such as CUG INDEX 2 (closed user group, "group index code") , a CUG IC 12 (closed user group network specific identifier, " group identity code") as taught by Palvianen to provide a mechanism that will prevent data security during a call.

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and transmitting said selected address so as to be receivable by a selected one of the mobile terminals corresponding to said address; wherein the method further comprises: receiving a message from one of said mobile terminals; and modifying the list of addresses of at least one of said arrays in response to said message. Haugli et al. discloses having a L-q data packet 125 ma that may be addressed to one or more of terminals... if a terminal does not detect its address among the data packets 125, it further processes the respective packet(s) and responds accordingly (column 15 line 27-33)It is inferred that the terminal respond by sending a request for data packets.

17. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haugli et al. (US Patent 5,991,279) in view of Gardner et al. (US Patent 6,058,289).

With regard to claim 30, Haugli et al. discloses having a *method of operating a messaging terminal for receiving messages from an earth station via a satellite*, Haugli et al. discloses having a two-way satellite communications system includes a earth station ("earth station") communicating with a plurality of remote stations ("message terminal" , Abstract) .

Haugli et al. does not discloses *the method comprising: transmitting to the earth station a sleep mode request; receiving from the earth station a sleep mode allocation;* Gardner et al. discloses having a mobile unit 401 requesting to the base station ("earth station") a sleep mode request (column 7 line 28-32).

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Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have earth station ("earth station") and remote stations ("message terminal") as taught sending sleep mode request to the base station (" earth station") as taught by Gardner et al. to provide a mechanism to conserve power when there is no data to be received.

periodically entering a receiving state during which the messaging terminal is able to receive messages for a first period specified by said sleep mode allocation; Haugli et al. discloses having a remote terminal periodically wakes up to listen for incoming data (column 16 line 45-67).

and periodically entering a non-receiving state during which the messaging terminal is not able to receive messages for a second period specified by said sleep mode allocation. Haugli et al. discloses having a remote terminal ("messaging terminal") is not able receive data during a sleep mode (column 16 line 45-67).

Allowable Subject Matter

18. Claim 19 and 20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DeWanda Samuel whose telephone number is (571) 270-1213. The examiner can normally be reached on Monday- Thursday 8:30-5:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DeWanda Samuel
7/22/2007


RICKY Q. NGO
SUPERVISORY PATENT EXAMINER